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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Sudolcan et al.

Application No: 09/766,820

Filed: January 22, 2001

For: A BEVERAGE DISPENSER  
INCLUDING AN IMPROVED  
ELECTRONIC CONTROL SYSTEM

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Atty. Docket No: L-0170.23(D-E)

Examiner: A. Jackson

Group Art Unit: 2856

APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS  
COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicant timely presents in triplicate its Brief on Appeal for the referenced application.

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### REAL PARTY IN INTEREST

The real party in interest is Lancer Partnership, Ltd., a Texas limited liability partnership, having a business address of 6655 Lancer Blvd., San Antonio, Texas 78219

### RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences of which Applicant is aware.

### STATUS OF THE CLAIM

Claim 60 remains in the referenced application. Claim 60 stands rejected under 35 U.S.C. §103(a) by Bethuy et al. (U.S. Patent No. 5,732,563 - hereinafter referred to as Bethuy) in view of Piatkowski, Jr. (U.S. Patent No. 4,010,650 - hereinafter referred to as Piatkowski).

### STATUS OF AMENDMENTS

Applicant's Amendment "A" dated January 21, 2003 was entered into the referenced application.

Applicant's Amendment After Final dated June 19, 2003 was not entered into the referenced application.

Applicant's Request for Reconsideration and Second Amendment After Final dated September 23, 2003 was not entered into the referenced application.

Applicant's Second Request for Reconsideration and Second Amendment After Final dated October 21, 2003 was entered into the referenced application.

Applicant's Amendment "B" dated January 13, 2004 was entered into the referenced application.

Applicant's Amendment After Final dated July 21, 2004 was not entered into the referenced application.

## SUMMARY OF THE INVENTION

The claimed invention consists of a liquid level monitoring system including a microcontroller 51 that delivers a pulse signal received by probes 121 and 122. When the probes 121 and 122 are not contacted by liquid in the liquid container, the pulse signal delivered by the microcontroller 51 to the probes 121 and 122 is shunted back to the microcontroller 51 indicating an insufficient amount of liquid in a liquid container. Conversely, when the probes 121 and 122 are contacted by liquid in the liquid container, the pulse signal delivered by the microcontroller 51 to the probes 121 and 122 is attenuated to ground via the ground probe 123 indicating to the microcontroller 51 a sufficient amount of liquid in the liquid container. Applicant's microcontroller 51 delivers the pulse signal to the probes 121 and 122 because the application of a pulse signal, which is a discrete positive-going on/off signal, to the probes 121 and 122 diminishes the plating of impurities contained in the liquid onto the probes 121 and 122.

## ISSUE

Whether claim 60 is patentable under 35 U.S.C. §103(a) over Bethuy in view of Piatkowski.

## GROUPING OF THE CLAIM

Claim 60 stands alone and is considered separately patentable.

## ARGUMENT

The Examiner admits Bethuy fails to disclose a controller that is coupled to first and second probes and that outputs a pulse signal received at the first and second probes. The Examiner thus combines Bethuy with Piatkowski and asserts Piatkowski discloses the application of a pulse signal to first and second probes. Applicant respectfully disagrees with the Examiner's assertion. Piatkowski simply does not disclose the application of a pulse signal to

first and second probes. Piatkowski very clearly discloses the application of a constant alternating voltage across electrodes 22 and 30 (see column 3, line 49, through column 4, line 18). A constant alternating voltage is not a pulse signal. A constant alternating voltage is a voltage signal that continuously traverses from a positive voltage to a negative voltage during the entire time of its application. In contrast, a pulse signal is a positive only voltage applied for a short period of time. Applicant accordingly respectfully submits Piatkowski does not disclose the application of a pulse signal to first and second probes because a constant alternating voltage is not a pulse signal.

Applicant therefore respectfully submits the combination of Bethuy in view of Piatkowski does not disclose the invention of claim 60 because modifying Bethuy in view of Piatkowski provides a system that applies only a constant alternating voltage across any system probes, and a constant alternating voltage is not a pulse signal. As such, the system resulting from the combination would not diminish the plating of impurities contained in a liquid onto the probes because the constant alternating voltage is continuously on and would therefore continuously subject the probes to a plating effect. Applicant accordingly respectfully submits claim 60 is patentable over the combination of Bethuy in view of Piatkowski because that combination does not disclose the output of a pulse signal to first and second probes thereby diminishing the plating of impurities contained in a liquid onto the probes.

In asserting the above-recited rejection, the Examiner contends it is well known in the art to have an alternating current (AC) signal in place of a pulse signal. The Examiner has cited U.S. Patent No. 6,018,247 to Kelly and U.S. Patent No. 4,092,867 to Matzuk as evidence that an AC signal may be used in place of a pulse signal. Applicant respectfully disagrees with the Examiner's contention, and submits the references cited by the Examiner in fact support

Applicant's position that an AC signal is not a pulse signal nor can an AC signal be used in place of a pulse signal.

An AC signal is used for the transmission of power or in high voltage applications, whereas a pulse signal is used in low voltage applications to power and operate micro-electronic circuits. An AC signal delivered to a micro-electronic circuit is converted to a direct current (DC) signal, which may be in the form of a pulse signal. Applicant respectfully asks, "Why is there a need to convert an AC signal to a DC signal if the two signals are interchangeable?" The obvious answer is that an AC signal is not interchangeable with a DC or pulse signal. This conclusion is supported by U.S. Patent No. 6,018, 247 to Kelly and U.S. Patent No. 4,092, 867 to Matzuk, which, as stated by the Examiner, respectively disclose the conversion of a DC signal to an oscillating signal and an oscillating signal to a DC signal. If an AC signal was interchangeable with a pulse signal as asserted by the Examiner, there would be no need to convert from one signal to the other as disclosed by U.S. Patent No. 6,018, 247 to Kelly and U.S. Patent No. 4,092, 867 to Matzuk. Applicant therefore respectfully submits claim 60 is patentable over the combination of Bethuy in view of Piatkowski because the constant alternating voltage signal disclosed by Piatkowski is not a pulse signal nor is the constant alternating voltage signal in any way interchangeable with a pulse signal.

In asserting the above-recited rejection, the Examiner further contends it is obvious to convert the constant alternating voltage signal disclosed by Piatkowski into a pulse signal on the basis it is known that a DC signal may be converted to an oscillating signal and an oscillating signal may be converted to a DC signal, as taught by U.S. Patent No. 6,018,247 to Kelly and U.S. Patent No. 4,092,867 to Matzuk. Applicant respectfully disagrees with the Examiner's contention. Although it is known that a DC signal may be converted to an oscillating signal and

an oscillating signal may be converted to a DC signal, Applicant respectfully submits the only reason to convert the constant alternating voltage signal disclosed by Piatkowski into a pulse signal is to achieve Applicant's claimed invention. This clearly is an impermissible hindsight reconstruction of Applicant's invention employing Applicant's own disclosure. Piatkowski employs a constant alternating voltage signal because, as disclosed by Piatkowski, a constant alternating voltage with a suitable frequency produces the most accurate measurements over the widest range of water qualities. In particular, the application of a 200 Hz constant alternating voltage across electrodes 22 and 30 according to Piatkowski results in the most accurate measurements over the widest range of water qualities. The mere fact that a DC signal may be converted to an oscillating signal and an oscillating signal may be converted to a DC signal is insufficient to teach the conversion of the constant alternating voltage signal disclosed by Piatkowski into a pulse signal because Piatkowski specifically employs a constant alternating voltage with a suitable frequency to achieve the desired result of greater measurement accuracy over the widest range of water qualities. There simply is no reason to convert the constant alternating voltage signal disclosed by Piatkowski into a pulse signal other than to reproduce Applicant's claimed invention. Applicant accordingly respectfully submits claim 60 is patentable over the combination of Bethuy in view of Piatkowski because converting the constant alternating voltage signal disclosed by Piatkowski into a pulse signal as suggested by the Examiner constitutes an impermissible hindsight reconstruction of Applicant's invention employing Applicant's own disclosure.

In view of the foregoing, Applicant respectfully requests the Final Rejection of the Examiner dated May 19, 2004, be reversed.

Respectfully submitted,

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DATE: 28 September 2004

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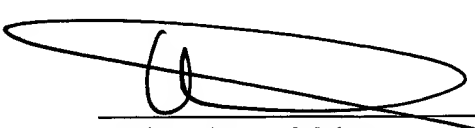
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the dated indicated below, addressed to the Commissioner for Patents, P.O. Box 1450, Arlington, VA 22313-1450.

Express Mail No. EV 406463159 US Date: 28 September 2004

  
Christopher L. Makay



## APPENDIX

A liquid level monitoring system, comprising:

a first probe extending into a liquid container;

a second probe extending into the liquid container;

a ground probe attached to the liquid container;

a controller coupled with the first probe and the second probe, wherein the controller outputs a pulse signal received at the first probe and the second probe, whereby, when both the first probe and the second probe are not contacted by liquid in the liquid container, the controller receives the pulse signal indicating an insufficient amount of liquid in the liquid container, and, when both the first probe and the second probe are contacted by liquid in the liquid container, the pulse signal is attenuated to ground via the ground probe indicating to the controller a sufficient amount of liquid in the liquid container.